

Baby Girl

#30

pt 11



FINAL REPORT OF LABORATORY EXAMINATION

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IDEXX BioResearch Case # 6238-2017

Received: 2/17/2017

Completed: 3/6/2017

Submitted By

Leslie Jarrell
Priority One Services (EPA)
109 TW Alexander Dr., MDB105-10
Research Triangle Park, NC 27709

Phone: 919-541-5155
Fax: 919-541-2142
Email: jarrell.leslie@epa.gov

Specimen Description

Species: rabbit
Number of Specimens/Animals: 2
Study: [REDACTED]

Client ID	Strain /Breed
Rabbit 25	NZW
Rabbit 30	NZW

Services/Tests Performed: Histopathology Services

Histopathologic evaluation for: kidney, liver, mammary gland, ovary, skeletal muscle, spleen, uterus

General Comments: Rabbit 25 = spleen, liver, kidney (+ 1 tissue I can't remember). Geriatric rabbit with chronic pododermatitis. Necropsy- pododermatitis lesions.

Rabbit 30 = skin ventral abdomen, (skin) multiple abscesses, uterine mass, ovarian mass. Geriatric rabbit with chronic but gradual weight loss. Necropsy- many slightly raised, subcutaneous and dermal flat abscesses with yellow thick purulent material on ventral abdomen. Suspect mastitis? Uterine mass firm, ovarian mass possible.

Summary: Animal 25 had hepatic hemosiderosis.

Animal 30 had two uterine masses including a uterine leiomyoma and a uterine adenocarcinoma with myometrial hyperplasia. No lesion was noted in the single ovary submitted. There was mammary gland dysplasia with cysts. This is a common finding in aging NZW rabbits with concurrent pituitary gland prolactin secreting adenomas (no pituitary gland submitted).

HISTOPATHOLOGY

Animal: Rabbit 25

kidney	There is mild multifocal mineralization.
liver	There is multifocal brown pigment accumulation in hepatocellular cytoplasm. Pigment stains positive for hemosiderin on iron stained sections and negative for copper. Focally there is capsular fibrosis.
spleen	no significant lesions

Animal: Rabbit 30

mammary gland	Greatly expanding the subcutaneous tissue are large cystic mammary acini often containing proteinaceous product. Glands also form smaller aggregates with multilayered acini with pleomorphism (dysplasia).
ovary	no significant lesions
skeletal muscle	no significant lesions
uterus	Two uterine masses were evaluated. In the first, there was moderate expansion of the myometrium and filling with closely packed neoplastic cells. Cells form interlacing bundles with abundant fibrovascular stroma. Cells are elongate and have oval to elongate finely stippled centrally located nuclei with pale abundant cytoplasm. Mitoses are not observed. Mass is consistent with uterine leiomyoma. In the second mass, there is expansion of the myometrium and infiltration with neoplastic cells. Cells form tubuloacinar structures (some multilayered) admixed amongst abundant smooth muscle and lesser collagenous stroma. Cells are polygonal with round to oval finely stippled nuclei and variably prominent nucleoli. Mitoses are 1-3 per 400x field. Mass is consistent with uterine adenocarcinoma with myometrial hyperplasia.

Jarrell, Leslie

Baby Girl

From: Jarrell, Leslie
Sent: Tuesday, December 27, 2016 12:30 PM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: AHR# 16146- AHR closed

For your records, this AHR was closed 11/18/16 by [REDACTED] this rabbit was euthanized.

From: Jarrell, Leslie
Sent: Friday, October 28, 2016 1:30 PM
To: [REDACTED]
[REDACTED]
Cc: [REDACTED]
[REDACTED]
Subject: RE: AHR# 16146

Here are the notes for Rabbit #30, Baby Girl
Thanks,
Leslie

Oct 28, 2016;
Rabbit 30 (Baby Girl), has had some continued, gradual weight loss. However she is still eating well and acting normally. Due to her age, I am suspicious that she may have uterine cancer. But I haven't found a mass yet. I've got arrangements to get bloodwork sent out to the lab. Probably will get a sample the second or third week of Nov if that is ok. Plan to monitor for now.

Sept 28, 2016 email;
Baby Girl, Rabbit 30, is at the lower end of her weight range. [REDACTED] noted that she has been eating well and acting normally for her. [REDACTED] and I examined her today. She is a bright, social and active rabbit. I didn't find any obvious issues on exam, but did not check her teeth. We are increasing hay so that should help with tooth issues, unless she has a tooth root abscess. We can't assess her teeth without radiographs.

We will keep an eye on her, and her weight. I would like to pull blood for CBC/Chem as well, sometime during the next few weeks.

From: [REDACTED]
Sent: Friday, October 28, 2016 1:16 PM
To: [REDACTED]
Cc: Jarrell, Leslie <Jarrell.Leslie@epa.gov>; [REDACTED]
[REDACTED]
Subject: AHR# 16146

Number: 16146
Date Found: 10/28/16
Time Found: 1:00pm
Found by:
Room: A486B
Investigator: [REDACTED]
LAPR#: 19-03-002
Species/Strain: Rabbit/NZW

Sex: Female
DOB: 02/24/08
Date Received: 07/06/09
Animal ID/Cage: 30 (Baby Girl)
Weight loss

Jarrell, Leslie

From: Jarrell, Leslie
Sent: Thursday, December 08, 2016 11:59 AM
To: [REDACTED]
Cc: Graff, Jaimie; [REDACTED]
Subject: Rabbit necropsies #25 and #30

Hi [REDACTED]

Here are the necropsy reports for Peter Rabbit and Baby Girl. They were really good rabbits.

#25 Peter

S/O: Geriatric rabbit with pododermatitis. A/P: Elected euthanasia after recurrence of pododermatitis.

Necropsy; Scabs on both hind feet at pododermatitis lesions. When scabs were removed, no skin remained on those areas. Abdomen- normal ingesta in stomach, kidneys, spleen, liver within normal limits. No obvious heart or lung issues. Few areas of skin inflammation from contact irritation from urine at perineum and caudal ventral abdomen. Assessment- pododermatitis lesions, recurrent
Tissues taken for histopath.

#30 Baby Girl

S/O: Geriatric rabbit with continued, very slow weight loss. A/P: Elected euthanasia after no weight gain with good appetite.

Necropsy; Many slightly raised, subcutaneous and dermal, flat abscesses with yellow thick purulent material, along ventral abdomen. These were not palpable due to heavy fur coat. Lesions similar, but not entirely consistent with mastitis lesions seen in other rabbits. Uterine mass, firm, around 2 cm diameter, in one uterine horn, and ovarian mass suspected. No obvious lung abnormalities.
Assessment; Open, mastitis, uterine cancer
Tissues taken for histopath.

Thanks very much for your time and care of these rabbits.

Best,
Leslie

Jarrell, Leslie

From: Jarrell, Leslie
Sent: Monday, November 21, 2016 12:51 PM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie
Subject: FW: Rabbit updates- please respond on Mon

FYI. We are set for 2 pm tomorrow.

Will need the rabbit induction box, a few towels, set up for 4th procedures room (the corner surgery room)

Thanks,
Leslie

From: [REDACTED]
Sent: Monday, November 21, 2016 12:27 PM
To: Jarrell, Leslie <Jarrell.Leslie@epa.gov>
Subject: RE: Rabbit updates- please respond on Mon

thanks

From: Jarrell, Leslie
Sent: Monday, November 21, 2016 12:21 PM
To: [REDACTED]
Subject: RE: Rabbit updates- please respond on Mon

I'm sorry. I can't see a way around it. Please let me know when you and [REDACTED] have said goodbye's? Then [REDACTED] and I will plan for this afternoon, or tomorrow, to euthanize both.

Very sorry.
Leslie

From: [REDACTED]
Sent: Monday, November 21, 2016 12:19 PM
To: Jarrell, Leslie <Jarrell.Leslie@epa.gov>
Subject: RE: Rabbit updates- please respond on Mon

This is not a good Monday.
Do what you have to do.

[REDACTED]

From: Jarrell, Leslie
Sent: Friday, November 18, 2016 4:21 PM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie
<Graff.Jaimie@epa.gov>; [REDACTED]
[REDACTED]
Subject: Rabbit updates- please respond on Mon
Importance: High

Hi [REDACTED]

Thumper is doing well! However, Baby Girl and Peter have had continued issues.

Baby Girl is eating well, and she is active, bright, alert and hydrated. She has normal feces, and is very personable. However she has had continual slow weight loss this year. From last week's exam to this week's, her body condition score has gone down. I can palpate what I suspect is an enlarged uterus. Due to her fairly normal exams, and her normal appetite despite her continuing weight loss, I'm very suspicious of neoplasia, likely repro.

Similarly, Peter rabbit is eating well, and he is active, bright, alert and hydrated. He is hopping around and doesn't appear to be painful. However he still has pododermatitis on both back feet, and he is not improving.

My concern for both of these rabbits is that although they appear to be eating well and bright now, that they are on a downhill trend. I think that they will continue to deteriorate, and will start to feel bad. Currently I think they have mainly good days. Over the years, I have found that it is better to plan for euthanasia to be on animal's "good day", then to wait until the animal is feeling very bad and then your hand is forced to euthanize. Because at that point, you could have relieved suffering earlier.

So, I am recommending that euthanasia be considered for both rabbits, next week. I'm very sorry to have to recommend that. They have been excellent, sociable, rabbits, and I'm sure they have helped science tremendously over their lives.

Please let me know your thoughts on Mon.

Thanks,

Leslie

Jarrell, Leslie

Baby Girl

From: Jarrell, Leslie
Sent: Monday, November 21, 2016 12:26 PM
To: [REDACTED]
Subject: RE: Rabbit updates- please respond on Mon

Yes that's fine. We could plan for 2 pm if that is OK.
Thanks.

From: [REDACTED]
Sent: Monday, November 21, 2016 12:23 PM
To: Jarrell, Leslie <Jarrell.Leslie@epa.gov>
Subject: RE: Rabbit updates- please respond on Mon

[REDACTED]'s not back yet.
Can you do it tomorrow afternoon ?
[REDACTED]

From: Jarrell, Leslie
Sent: Monday, November 21, 2016 12:21 PM
To: [REDACTED]
Subject: RE: Rabbit updates- please respond on Mon

I'm sorry. I can't see a way around it. Please let me know when you and [REDACTED] have said goodbye's? Then [REDACTED] and I will plan for this afternoon, or tomorrow, to euthanize both.
Very sorry.
Leslie

From: [REDACTED]
Sent: Monday, November 21, 2016 12:19 PM
To: Jarrell, Leslie <Jarrell.Leslie@epa.gov>
Subject: RE: Rabbit updates- please respond on Mon

This is not a good Monday.
Do what you have to do.

[REDACTED]

From: Jarrell, Leslie
Sent: Friday, November 18, 2016 4:21 PM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie
<Graff.Jaimie@epa.gov>; [REDACTED]
[REDACTED]
Subject: Rabbit updates- please respond on Mon
Importance: High

Hi [REDACTED]

Thumper is doing well! However, Baby Girl and Peter have had continued issues.

Baby Girl is eating well, and she is active, bright, alert and hydrated. She has normal feces, and is very personable. However she has had continual slow weight loss this year. From last week's exam to this week's, her body condition score has gone down. I can palpate what I suspect is an enlarged uterus. Due to her fairly normal exams, and her normal appetite despite her continuing weight loss, I'm very suspicious of neoplasia, likely repro.

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My concern for both of these rabbits is that although they appear to be eating well and bright now, that they are on a downhill trend. I think that they will continue to deteriorate, and will start to feel bad. Currently I think they have mainly good days. Over the years, I have found that it is better to plan for euthanasia to be on animal's "good day", then to wait until the animal is feeling very bad and then your hand is forced to euthanize. Because at that point, you could have relieved suffering earlier.

So, I am recommending that euthanasia be considered for both rabbits, next week. I'm very sorry to have to recommend that. They have been excellent, sociable, rabbits, and I'm sure they have helped science tremendously over their lives.

Please let me know your thoughts on Mon.

Thanks,

Leslie

Jarrell, Leslie

Baby Girl

From: Jarrell, Leslie
Sent: Friday, October 28, 2016 1:30 PM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: AHR# 16146

Here are the notes for Rabbit #30, Baby Girl
Thanks,
Leslie

Oct 28, 2016;

Rabbit 30 (Baby Girl), has had some continued, gradual weight loss. However she is still eating well and acting normally. Due to her age, I am suspicious that she may have uterine cancer. But I haven't found a mass yet. I've got arrangements to get bloodwork sent out to the lab. Probably will get a sample the second or third week of Nov if that is ok. Plan to monitor for now.

Sept 28, 2016 email;

Baby Girl, Rabbit 30, is at the lower end of her weight range. [REDACTED] noted that she has been eating well and acting normally for her. [REDACTED] and I examined her today. She is a bright, social and active rabbit. I didn't find any obvious issues on exam, but did not check her teeth. We are increasing hay so that should help with tooth issues, unless she has a tooth root abscess. We can't assess her teeth without radiographs.

We will keep an eye on her, and her weight. I would like to pull blood for CBC/Chem as well, sometime during the next few weeks.

From: [REDACTED]
Sent: Friday, October 28, 2016 1:16 PM
To: [REDACTED]
Cc: Jarrell, Leslie <Jarrell.Leslie@epa.gov>; [REDACTED]
Subject: AHR# 16146

Number: 16146
Date Found: 10/28/16
Time Found: 1:00pm
Found by:
Room: A486B
Investigator: [REDACTED]
LAPR#: 19-03-002
Species/Strain: Rabbit/NZW
Sex: Female
DOB: 02/24/08
Date Received: 07/06/09
Animal ID/Cage: 30 (Baby Girl)
Weight loss

Jarrell, Leslie

From: Jarrell, Leslie
Sent: Friday, October 28, 2016 12:06 PM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie; [REDACTED]
Subject: RE: Rabbit 30- update

Hi [REDACTED]

Rabbit 30 (Baby Girl), has had some continued, gradual weight loss. However she is still eating well and acting normally. Due to her age, I am suspicious that she may have uterine cancer. But I haven't found a mass yet.

I've got arrangements to get bloodwork sent out to the lab. Probably will get a sample the second or third week of Nov if that is ok. Plan to monitor for now.

Thanks,
Leslie

From: Jarrell, Leslie
Sent: Wednesday, September 28, 2016 11:58 AM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie <Graff.Jaimie@epa.gov>; [REDACTED]
[REDACTED]
Subject: Rabbit 30- update

Hi [REDACTED]

Baby Girl, Rabbit 30, is at the lower end of her weight range. [REDACTED] noted that she has been eating well and acting normally for her. [REDACTED] and I examined her today. She is a bright, social and active rabbit. I didn't find any obvious issues on exam, but did not check her teeth. We are increasing hay so that should help with tooth issues, unless she has a tooth root abscess. We can't assess her teeth without radiographs.

We will keep an eye on her, and her weight. I would like to pull blood for CBC/Chem as well, sometime during the next few weeks. Would that be OK?

Thanks,
Leslie

Jarrell, Leslie

Baby Girl

From: Jarrell, Leslie
Sent: Tuesday, October 25, 2016 10:53 AM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Timothy Hay Mats

Thanks [REDACTED] For Peter rabbit, if he can have one on the floor. We will see how he does.

It would be great if all the rabbits had mats, but the rest of them don't need one on the floor. It can be hung up on the bar or something so they could grab it. Like extra enrichment. Could remove keys or other hanging stuff so they get more variety. Also Peter could have one hanging if there is room.

We should be up to all of the rabbits getting 3 handfuls/ day of hay daily, if that could be confirmed. Also the Oxbow hay looks really good. Much softer and less stems/ heads. I'd recommend to buy the timothy from Oxbow as well.

Thanks,
Leslie

From: [REDACTED]
Sent: Tuesday, October 25, 2016 10:50 AM
To: Jarrell, Leslie <Jarrell.Leslie@epa.gov>
Cc: [REDACTED]
Subject: Timothy Hay Mats

Hi Leslie,

The Timothy hay mats arrived today for the rabbits. Would you like for ACS to put them in all of the cages or just for Peter?

Thanks,

[REDACTED]

Jarrell, Leslie

From: Jarrell, Leslie
Sent: Wednesday, September 28, 2016 11:58 AM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie; [REDACTED]
Subject: Rabbit 30- update

Hi [REDACTED]
Baby Girl, Rabbit 30, is at the lower end of her weight range. [REDACTED] noted that she has been eating well and acting normally for her. [REDACTED] and I examined her today. She is a bright, social and active rabbit. I didn't find any obvious issues on exam, but did not check her teeth. We are increasing hay so that should help with tooth issues, unless she has a tooth root abscess. We can't assess her teeth without radiographs.

We will keep an eye on her, and her weight. I would like to pull blood for CBC/Chem as well, sometime during the next few weeks. Would that be OK?

Thanks,
Leslie

Baby Girl

Jarrell, Leslie

From: Jarrell, Leslie
Sent: Wednesday, September 28, 2016 1:50 PM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie; [REDACTED]
Subject: RE: Rabbit 30- update

Thanks! Hopefully he will be OK with the clippers. He's had some mats clipped before. I'm not sure about the ones under his chin though. We will see, and not push him.
Thanks.

From: [REDACTED]
Sent: Wednesday, September 28, 2016 1:49 PM
To: Jarrell, Leslie <Jarrell.Leslie@epa.gov>; [REDACTED]
Cc: [REDACTED]
[REDACTED] Graff, Jaimie <Graff.Jaimie@epa.gov>; [REDACTED]
[REDACTED]
Subject: RE: Rabbit 30- update

sure

From: Jarrell, Leslie
Sent: Wednesday, September 28, 2016 11:58 AM
To: [REDACTED]
Cc: [REDACTED]
[REDACTED] Graff, Jaimie <Graff.Jaimie@epa.gov>; [REDACTED]
[REDACTED]
Subject: Rabbit 30- update

Hi [REDACTED]
Baby Girl, Rabbit 30, is at the lower end of her weight range. [REDACTED] noted that she has been eating well and acting normally for her. [REDACTED] and I examined her today. She is a bright, social and active rabbit. I didn't find any obvious issues on exam, but did not check her teeth. We are increasing hay so that should help with tooth issues, unless she has a tooth root abscess. We can't assess her teeth without radiographs.

We will keep an eye on her, and her weight. I would like to pull blood for CBC/Chem as well, sometime during the next few weeks. Would that be OK?

Thanks,
Leslie

Jarrell, Leslie

Baby Girl

From: Jarrell, Leslie
Sent: Wednesday, September 28, 2016 11:51 AM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie; [REDACTED]
Subject: RE: AHR# 16132- update 092816- increase hay again and plan

Hi, All rabbits were eating hay this morning. That is good to see. [REDACTED] and I checked Thumper again. He appears to be losing less fur, does not have alopecia, and is active and bright. Weight appears steady.

A: Appears to have had heavy shed.

P: Continue plan to increase hay. Currently getting hay morning and afternoon.

1. 3rd week (This week - Sept 26) offer 2 handfuls of hay morning and afternoon. During weekend, give 3 handfuls in the morning.
2. 4th week- week of Oct 3- offer 3 handfuls hay morning and 2 in afternoon. During weekend, give 3 handfuls hay in the morning.
3. We will need more hay.

Thanks,
Leslie

From: Jarrell, Leslie
Sent: Monday, September 12, 2016 10:22 AM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: AHR# 16132- increase hay please respond

Thanks [REDACTED] Will let you know how it goes!
Thanks,
Leslie

From: [REDACTED]
Sent: Monday, September 12, 2016 10:16 AM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: AHR# 16132- increase hay please respond

Sounds good.
We all need a little extra lovin as we age

From: Jarrell, Leslie

Sent: Monday, September 12, 2016 10:14 AM

To: [REDACTED]

[REDACTED]

Cc: [REDACTED]

[REDACTED]

Subject: RE: AHR# 16132- increase hay please respond

Hi [REDACTED]

[REDACTED] and I examined Thumper this morning. [REDACTED] reported that Thumper is eating well, defecating normally, has not had weight loss or ambulation issues. Thumper is 8.5 years old.

O: Weight appears steady, consistent with his regular body weight. Thumper is bright, alert, responsive and hydrated. No lameness or reluctance to hop. He is a personable and social rabbit. No obvious lesions or masses on physical exam. Hind feet appear furred. Did not do oral exam as he often resists. He is losing a large amount of fur, especially in comparison to all the other rabbits including Peter, who is the same age. He has some spots which appear slightly thin but no obvious alopecia.

A: DDX; open. Suspect related to seasonal fur loss and is having a very heavy shed. Or potentially he is having issues grooming- Although the coat is very clean. Differentials; open.

P: Since Thumper has not had weight loss, behavioral changes or ambulation issues, and appears to be eating well and defecating normally, recommend;

1. Increase brushing and remove all hair that is shed from cage so he doesn't eat it all.
2. Increase hay offered. Since all rabbits get one handful hay/ day, recommend to increase hay for all rabbits.
3. Plan for all rabbits; Offer 1 handful hay twice a day for 1 week. During the weekend, give 2 handfuls in the morning.
 - a. Next week (week of Sept 19); offer 2 handful hay in morning and 1 handful afternoon for a week. During weekend, give 3 handfuls in the morning
 - b. 3rd week (week of Sept 26) offer 2 handfuls of hay morning and afternoon. During weekend, give 3 handfuls in the morning. Continue this plan.
 - c. We may need more hay.
4. For Thumper- recheck 1 week or earlier. This was a good catch by [REDACTED] Hopefully Thumper is just having a very heavy shed.

Please let me know if this plan works for you.

Thanks,

Leslie

From: [REDACTED]

Sent: Monday, September 12, 2016 8:54 AM

To: [REDACTED]

Cc: Jarrell, Leslie <Jarrell.Leslie@epa.gov>; [REDACTED]

[REDACTED]

Subject: AHR# 16132

Number: 16132

Date Found: 09/12/16

Time Found: 8:00am

Found by: [REDACTED]
Room: A486B
Investigator: [REDACTED]
LAPR#: 09-03-002
Species/Strain: Rabbit/NZW
Sex: male
DOB: 02/05/08
Date Received: 09/06/09
Animal ID/Cage: 24
Dull coat/unthrifty
Losing a lot of fur

[REDACTED]
L.L. Brooks Enterprises
Contractor for U.S.E.P.A

Jarrell, Leslie

peter

From: Jarrell, Leslie
Sent: Wednesday, September 28, 2016 1:50 PM
To: [REDACTED]
Cc: [REDACTED]
Subject: RE: Rabbit 30- update

Baby Girl

Graff, Jaimie; [REDACTED]

Thanks! Hopefully he will be OK with the clippers. He's had some mats clipped before. I'm not sure about the ones under his chin though. We will see, and not push him.
Thanks.

From: [REDACTED]
Sent: Wednesday, September 28, 2016 1:49 PM
To: Jarrell, Leslie <Jarrell.Leslie@epa.gov>; [REDACTED]
Cc: [REDACTED]

Graff, Jaimie <Graff.Jaimie@epa.gov>; [REDACTED]

Subject: RE: Rabbit 30- update

sure

From: Jarrell, Leslie
Sent: Wednesday, September 28, 2016 11:58 AM
To: [REDACTED]
Cc: [REDACTED]

Graff, Jaimie <Graff.Jaimie@epa.gov>; [REDACTED]

Subject: Rabbit 30- update

Hi [REDACTED]
Baby Girl, Rabbit 30, is at the lower end of her weight range. [REDACTED] noted that she has been eating well and acting normally for her. [REDACTED] and I examined her today. She is a bright, social and active rabbit. I didn't find any obvious issues on exam, but did not check her teeth. We are increasing hay so that should help with tooth issues, unless she has a tooth root abscess. We can't assess her teeth without radiographs.

We will keep an eye on her, and her weight. I would like to pull blood for CBC/Chem as well, sometime during the next few weeks. Would that be OK?

Thanks,
Leslie

Jarrell, Leslie

Baby Girl

From: Jarrell, Leslie
Sent: Tuesday, July 19, 2016 11:19 AM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie; W [REDACTED]
Subject: RE: Rabbit Exams (6)- part 2
Follow Up Flag: Follow up
Flag Status: Flagged

[REDACTED] and I examined rabbits on 5/2/16 (Leo, Baby Girl and Leo) and 5/24/16 (Dixie, Oopsie and Daisy). I did not pursue oral exams.

- Rabbit 105 Trixie DOB 5/7/14. Did well for exam. BCS 2.5 on a scale of 1 to 5, where 2.5 is ideal. Weight 4.86 kg. Weight in 2015 was 4.68 kg.
- Rabbit 102, Leo, DOB 5/7/14, Did well for exam. BCS 2.5 on scale of 1 to 5, where 2.5 is ideal. Weight 4.36 kg. Weight in 2015 was 4.20 kg.
- Rabbit 30, Baby Girl, DOB 2/24/08. Did very well for exam. Weight 4.18 kg. Monitor.
 - Weight 2/1/13= 4.46 kg
 - Weight 3/25/15= 4.1 kg
 - So she has not lost weight since last year. However, will need to keep an eye on her.
- Rabbit 106, Dixie, DOB 5/7/14. Did well for exam. Weight 4.04 kg. Weight last year was 3.94 kg.
- Rabbit 107, Oopsie, Male intact rabbit, DOB 9/2/15, Weight 3.84 kg. Did well for exam. Slight mats on hind feet, watch for issues.
- Rabbit 108, Daisy, Female intact rabbit, DOB 9/2/15. Weight 3.30 kg. Very nervous, unable to get thorough exam due to temperament. Continue with socialization.

I would like to post the rabbits' weight history in the suite or room. Shannon has made a chart.

Thanks,
Leslie

From: Jarrell, Leslie
Sent: Friday, March 25, 2016 12:44 PM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie <Graff.Jaimie@epa.gov>
Subject: Rabbit Exams (4) and UV light - part 1

[REDACTED] and I examined 4 of the rabbits on 3/9/16. The rabbits did pretty well with exams, but I wasn't able to do oral exams on them. Hopefully the younger ones will eventually tolerate it. I will follow up with the other 6 rabbits' exams over the next month.

As a caveat- although dental exams using otoscope are useful at finding gross pathology of the teeth, current standards for dental care in rabbits involve use of skull x-rays. Earlier dental changes can be found on x-rays than by visual exam, and intervention can be started to delay clinical consequences due to pain and weight loss.

- Rabbit #24 Thumper DOB 2/25/08. Did well for exam. BCS 1.75 on a scale of 1 to 5, where 2.5 is ideal. This is a little lower than last year. [REDACTED] increased the pellets for Thumper last year, but Thumper is at 3.42 kg. He was

around 3.44 kg last year this time. However at least he has not lost any significant weight. I would like to see if we can get his body condition up a little. This makes me concerned about his teeth. He is 8 years old.

- Rabbit #25 Peter DOB 2/25/08. Did well with exam but didn't attempt to examine teeth. He had a number of mats which we have started to clip. I am thinking that he may not be able to groom as well as previously. Peter's weight was 3.96 kg. About a year ago, he was at 4.38 kg. This is significant weight loss. His body condition score is around 1.75 out of 5, where 2.5 is ideal and 1 is emaciated. His is 8 years old now.
 - We have access to CBC/ Chemistry panels for evaluating how his kidneys/ liver etc are doing, which I may like to pursue this year if that is OK with you. Most likely, I would think his teeth are an issue, but we don't have radiographs to evaluate him.
 - We will need to keep a close eye on his weight this year. Also keep working on his coat.
- Rabbit #101 Tex. DOB 5/17/14. Did well with exam. Had some mats, which we were able to clip. I'm not sure why he isn't grooming as well as expected. Plan to work on getting him to tolerate oral exam. And possibly more clipping. Weight 4.46 kg, around 1 year ago was 4.14 kg. Good weight.
- Rabbit #104 Jasper- DOB 5/17/14. Very nervous. Still did not tolerate exam very well. Feet well furred. Weight 4.68 kg, around 1 year ago was 4.14 kg. Good weight. Work on tolerating more handling.

Note; Last year I emailed about research on vitamin D in rabbits. This is the abstract from 2014 off PUBMED. Lab rabbits in particular don't get UV light exposure, and these rabbits are older than most NZW are usually kept. I would like to look into possibilities for checking their vitamin D levels over time, and potentially getting some kind of full spectrum lighting. Low levels of vitamin D have had implications in rabbits for; bone issues such as arthritis, and also dental issues. We have seen some level of these issues in a number of rabbits.

Thanks,
Leslie

Am J Vet Res. 2014 Apr;75(4):380-4. doi: 10.2460/ajvr.75.4.380.

Effects of ultraviolet radiation produced from artificial lights on serum 25-hydroxyvitamin D concentration in captive domestic rabbits (*Oryctolagus cuniculi*).

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Abstract

OBJECTIVE:

To determine the effects of UVB radiation produced by artificial lights on serum 25-hydroxyvitamin D concentrations in domestic rabbits (*Oryctolagus cuniculi*).

ANIMALS:

9 juvenile domestic rabbits.

PROCEDURES:

After an acclimation period, rabbits were anesthetized with isoflurane, and an initial blood sample was collected for determination of serum 25-hydroxyvitamin D concentration. Rabbits were randomly assigned to receive 12-hour exposure to UVB radiation produced by 2 compact fluorescent lights daily ($n = 5$) or no UVB supplementation (4) commencing on day 1. The UVB radiation emitted into the cage was measured at 9 points approximately 34 cm from the surface of the UVB light sources (representing the position of the rabbits in the cage) after 10 hours of exposure on days 1, 8, and 14. On day 14, another blood sample was collected from anesthetized rabbits for determination of serum 25-hydroxyvitamin D concentration.

RESULTS:

The UVB radiation level was 8.3 to 58.1 $\mu\text{W}/\text{cm}^2$ for the exposed rabbits and consistently $< 0.001 \mu\text{W}/\text{cm}^2$ for the control rabbits. Mean \pm SD serum 25-hydroxyvitamin D concentrations in the rabbits that were or were not provided supplemental UVB radiation for 14 days differed significantly ($66.4 \pm 14.3 \text{ nmol/L}$ and $31.7 \pm 9.9 \text{ nmol/L}$, respectively).

CONCLUSIONS AND CLINICAL RELEVANCE:

Exposure to UVB radiation produced by artificial light significantly increased serum 25-hydroxyvitamin D concentration in juvenile rabbits. Because vitamin D is an essential hormone in vertebrates, these findings suggested that the provision of supplemental UVB radiation to captive rabbits may be important.

SMALL MAMM/PATIENT EXAMINATION REPORT CARD

1. Coat/Fur & Skin

Appears normal
Sealy
Infection
Matted
Itchy
Dull/Dry
Scabs
Shedding
Tumors
Hair Loss

2. Eyes

Appears Normal
Inflamed
Eyelid Deformities
Cataract: L R
Discharge
Infection
Ulcer: L R

3. Ears

Appears Normal
Dirty
Tumor: L R
Excessive Hair
Inflamed: L R
Mites
Infected
Painful

4. Nose

Appears Normal
Other:
Nasal Discharge

5. Mouth, Teeth, Gums

Appears Normal
Tartar Buildup
Overgrown Incisors
Overgrown Molars
Overgrown roots
Broken Teeth
Tumors
Inflamed Lips
Periodontal Disease
Abscessed

6. Legs & Paws

Appears Normal
Nail Problems
Other:
Joint Problems
Lameness

7. Heart

Appears Normal
Slow
Murmur
Fast
Irregular

8. Lungs

Appears Normal
Abnormal Sound
Rapid Respiration
Coughing
Congestion
Dyspnea

9. Abdomen

Appears Normal
Enlarged Organs
Fluid
Abnormal Mass
Tense/Painful
Swollen

10. Gastrointestinal System

Appears Normal
Stasis/ Impaction
Anorexia
Abnormal Feces
Parasites

11. Urogenital System

Appears Normal
Mammary Tumors
Abnormal Testicles
Abnormal Urination
Genital Discharge

12. Weight

Normal
Heavy By:
Obese
Thin By:

TESTS NEEDED:

Annual Blood Work
Urinalysis
Fecal Examination
Spay / Neuter
Microchip
Skin Scraping
Fungal Culture
Ear Cytology

RECOMMENDATIONS:

Cage Change:
Bedding Change: Change Type
Diet Change: Please see handout

Tech Initials: _____

Temp: _____

Weight: 4.18 kg

Appetite:

normal / increased / decreased

Water Intake:

normal / increased / decreased

Coughing:

No / Yes, Frequency: _____

Sneezing:

No / Yes, Frequency: _____

Urination: normal / increased / decreased

Attitude: normal / abnormal

Feces: normal / abnormal

Presented For: regular exam

Historical Issues/ Medications:

Current Diet:

pellets, hay, hay stalks, fresh veg

Examination:

BART. MM pi + max CRT (see H2162),
no murmurs, or arrhythmias ausculted
EON OK LW ml Abd ml no masses
palpated. feet ok. clean.

Ⓐ Appears ok - geriatric?

Ⓟ Monitor - 2 panels AM

Doctor: Doctor's name, DVM

Need:

In:

Days

DIAGNOSIS OR PROBLEMS

PROGNOSIS

DIFFERENTIAL DIAGNOSIS

PLAN

Today's Date:

5/2/16

Chart #:

30

Species/Breed:

New Rabbit

DOB: 2/24/08

Pet's Name:

Baby Girl

Last Name

[REDACTED]

Color: white

Sex: FI

Jarrell, Leslie

Baby Girl

From: Jarrell, Leslie
Sent: Thursday, February 25, 2016 2:08 PM
To: [REDACTED]
Cc: [REDACTED] Graff, Jaimie
Subject: RE: Rabbit exams

Thank you!
Leslie

From: [REDACTED]
Sent: Thursday, February 25, 2016 2:08 PM
To: Jarrell, Leslie <Jarrell.Leslie@epa.gov>; [REDACTED]
Cc: [REDACTED]
[REDACTED] Graff, Jaimie <Graff.Jaimie@epa.gov>
Subject: RE: Rabbit exams

That's fine

From: Jarrell, Leslie
Sent: Thursday, February 25, 2016 2:07 PM
To: [REDACTED]
Cc: [REDACTED]
[REDACTED] Graff, Jaimie <Graff.Jaimie@epa.gov>
Subject: Rabbit exams

Hi [REDACTED]
It's that time of year for rabbit exams. I've tentatively scheduled March 8 at 1- 2 pm, and March 9 from 9:30- 10:30 AM, and March 16 from 9:30- 10:30 AM for their annual exams. Would that work ok for your schedules?

Thanks,
Leslie

Patient Information		Alerts	Wellness Exam Semiannual
PI	[REDACTED]		
Patient	H30 Baby Girl		
Sex	FI		
Breed	NZW		
Color	white		
DOB	2/24/08		

[illegible][illegible]